## REMARKS

As an initial matter, Applicants wish to thank the Examiner for indicating that Claims 26, 28, 31-33 and 42-46 would be allowable if rewritten in independent form including all of the limitation of the base claim and any intervening claims. It is also noted that the Office Action Summary cover page incorrectly lists claims 24-26 as being pending when in fact claims 24-46 are pending in this application.

Claim 24 has been amended *inter alia* by replacing the term "prodrug" with the terms "esters" and "amides" to indicate specific prodrug derivatives. Support for such an amendment can be found throughout the specification including on page 20, lines 12-18. In addition, Claim 24 has been amended *inter alia* by, in effect, replacing the term "isomers" with the term "stereoisomers". Support for such an amendment is found throughout the specification, for example, on page 20, lines 20-29. Claims 24, 25 and 27 have been amended by deleting the seventh from the last and the ninth from the last choices of "A". No new matter has been added.

**Art Based Rejections**

Claims 24, 25, 27, 29 and 30 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by PCT Publication No. WO 99/15509 (WO '509) and/or the Wolfrom reference. In particular, the Office Action alleges that next to the last specie in Claim 5 of WO '509 corresponds to the seventh from the last choice of "A" in Claim 24 and Compound IV in the Wolfrom reference corresponds to the ninth from the last choice of "A" in Claim 24.

Claims 24, 25 and 27 have been amended by deleting these two choices from the list of possible "A" moieties thereby obviating this rejection. Accordingly, it is respectfully requested that the rejections under 35 U.S.C. §102(b) be withdrawn.

**Rejections under 35 U.S.C. §112, second paragraph**

Claims 24-25 and 34-41 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. In particular, the Office Action finds faults with the use of terms "prodrug thereof" and "isomer."

The term "prodrug" is clearly defined on page 19, line 28 through page 20, line 19 of the specification and clearly set forth what is meant by the term and exemplified by a few examples. Therefore, it is submitted that this term is not indefinite. However, in order to expedite the prosecution of this application, Applicants have amended Claim 24 by replacing the term "prodrug" with the terms "esters" and "amides" to indicate specific prodrug derivatives.

The term "isomer" is also clearly defined in the specification. See, for example, page 20, lines 20-29. In particular, the term "isomer" refers to stereoisomers, which includes diastereomers and enantiomers. Therefore, it is submitted that the term "isomer" is also not indefinite. However, in order to expedite the prosecution of this application, Applicants have amended Claim 24 by replacing the term "isomers" with the term "stereoisomers."

The Office Action also alleges the term "elevated" in Claim 34 is indefinite because it is unclear whether the term is relative to a specific number or to a previous adenylyl cyclase activity measurement.

It is noted that all that the patent laws require is that the claims be sufficiently clear that those skilled in the art are able to determine the scope of the claims. *In re Mercier*, 185 U.S.P.Q. 774 (C.C.P.A. 1975) (claims sufficiently define an invention so long as one of ordinary skill can determine what subject matter is or is not within the scope of the claims). The present claims comply with this standard.

Claim 34 is directed to a "method of inhibiting adenylyl cyclase in a patient having a disease or condition modulated by elevated levels of adenylyl cyclase activity." Thus, the term "elevated" refers to a level of adenylyl cyclase activity which manifests itself as a disease or condition in a patient. Accordingly, one skilled in the art can readily determine whether a patient has an "elevated" level of adenylyl cyclase activity, for example, by observing or examining one or more symptom(s) of a disease or condition manifested by elevated levels of adenylyl cyclase activity or by measuring the adenylyl cyclase activity in a patient.

The Office Action also alleges Claim 34 is indefinite because there is no standard list of diseases which are covered by elevated levels of adenylyl cyclase activity. Furthermore, the Office Action alleges undue experimentation is needed to determine

whether a given disease responds or does not respond to inhibition of adenylyl cyclase activity.

It is axiomatic that the description of the invention is the role of the specification, not the claims. *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.,* 1 U.S.P.Q.2d 1081 (Fed. Cir. 1986). In addition, the amount of detail required to be included in the claims is not to be viewed in the abstract but in conjunction with the specification. *Shatterproof Glass Corp. v. Libbey-Owens Ford Co.,* 225 U.S.P.Q. 634 (Fed. Cir. 1985).

The specification clearly lists some of the diseases and conditions that are manifested by elevated levels of adenylyl cyclase. See, for example, page 1, line 10, to page 5, line 28. Furthermore, one skilled in the art can readily determine whether a given disease responds or does not respond to compounds of the present invention. This can be done by administering a compound of the present invention to a patient and simply observing its affect on one or more symptom(s) of a disease or condition manifested by elevated levels of adenylyl cyclase activity or by measuring the adenylyl cyclase activity in a patient.

More significantly, whether only some of the patients respond to such a treatment is irrelevant. It is well known to one skilled in the art that drugs do not work on every single person. Despite this fact, there are hundreds, if not thousands, of issued U.S. Patents which deals with treating diseases or disorders by administering a compound. Obviously, USPTO does not deem such patents to be indefinite.

Accordingly, Applicants respectfully request that the rejections under 35 U.S.C. §112, second paragraph, be withdrawn.

**Rejections under 35 U.S.C. §112, first paragraph**

Claims 24 and 25 are rejected under 35 U.S.C. §112, first paragraph, allegedly for non-enablement of solvate, hydrate or isomer forms of the compounds.

There is no requirement in the patent law that every representative compound has to be explicitly disclosed or exemplified in the specification. Moreover, when rejecting a claim under the enablement requirement of §112, the Patent Office bears the "initial burden of setting forth a reasonable explanation as to why...the scope of

protection provided by [the] claim is not adequately enabled by the description of the invention provided in the specification." *In re Wright*, 27 U.S.P.Q.2d. 1510, 1513 (Fed. Cir. 1993). To object to a specification on the grounds that the disclosure is not enabling with respect to the scope of a claim sought to be patented, the Examiner must provide evidence or technical reasoning substantiating those doubts. *Id.*; and M.P.E.P. §2164.04. Without a reason to doubt the truth of the statements made in the patent application, the application must be considered enabling. *In re Wright*, 27 U.S.P.Q. 2d at 1513; *In re Marzocchi*, 169 U.S.P.Q. at 369.

The Office Action does not provide any evidence or technical reasoning substantiating this alleged nonenablement. The Office Action simply concludes that:

> ...the dozens examples presented all failed to produce a solvate of hydrate. These cannot simply willed into existence.... applicants must show that solvates or hydrates can be made, or limit the claims accordingly.

Page 5, second to the last paragraph, of the Office Action. In support of this proposition, the Office Action cites *Morton International Inc. v. Cardinal Chemcial Co.*, 28 USPQ2d 1190.

In *Morton International Inc. v. Cardinal Chemcial Co.*, there was a "clear and convincing evidence [that showed] the examples of the '881 patent do not produce the postulated compounds.... [Moreover, t]he evidence established that a number of these [compounds claimed in the '881 patent] are [known] prior art compounds..." *Id.* at 1194. Thus, a clear evidence was presented in invalidating the '881 patent.

In contrast, the Office Action does not provide any evidence as to why the solvates and hydrates of the present invention cannot be prepared by one of ordinary skill in the art. Since the Office Action does not provide any evidence supporting the nonenablement rejection, it is submitted that the initial burden of proof has not been met, and therefore the nonenablement rejection is improper.

In the event the nonenablement rejection is maintained, Applicants provide the following arguments which clearly show that the specification is enabling. Unlike enablement for making different compounds that was an issue in *Morton International Inc. v. Cardinal Chemcial Co.*, the Office Action objects to the lack of specific examples for producing solvates and hydrates of compounds disclosed in the

present application. As is well known in the art, solvates and hydrates refer to compounds having solvent and water molecules, respectively. The solvent (or water) molecules are not covalently bonded to the compound, but rather they are simply present due to one or more of many reasons known to one skilled in the art, e.g., hydrogen bonding, van Der Waal's force, electrostatic interaction, and the like. Furthermore, solvates and hydrates of a compound can be readily prepared by simply adding a solvent or water to the compound or by only partially removing the solvent or water during a drying process. Therefore, one skilled in the art can readily produce solvates and hydrates of compounds of the present invention.

As for the use of the term "isomers," Applicants have amended Claim 24 by replacing the term "isomer" with "stereoisomer" thereby rendering this rejection moot. Preparation of stereoisomers of a given compound is well known to one skilled in the art. In fact, while some enantioselective and diastereoselective syntheses of chiral compounds are known, most syntheses of chiral compounds still involve preparing a mixture of stereoisomer such as an enantiomeric mixture (e.g., racemates) or a diastereomeric mixture. Hence, one skilled in the art can readily prepare stereoisomers of compounds of the present invention.

Accordingly, it is submitted that the rejections under 35 U.S.C. §112, first paragraph, are without any merit. Therefore, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. §112, first paragraph.

**Objection to the Abstract**

The Abstract is objected to as allegedly not conveying the structure of compounds.

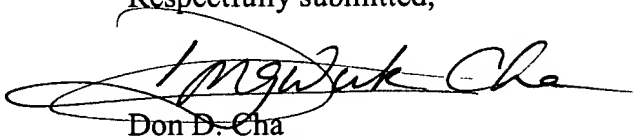
The Abstract has been amended as suggested in the Office Action.

## CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,



Don D. Cha
Reg. No. 40,945

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, 8th Floor
San Francisco, California 94111-3834
Tel: 303-571-4000
Fax: 415-576-0300
DDC:ddc

WC 9054407 v1